the dish which consequently holds the objects fast. As soon as a surface film is formed enough water can be added to cover the embedding mold to complete the hardening of the paraffin.

In petri dishes or watch glasses the bottom is practically flat and true and the tissue is allowed to sink to the bottom. When the tissue is cut out as a block the part that rested against the bottom makes one of the two parallel sides and requires little or no trimming.

When a number of pieces of tissue or a number of series (as described above) are embedded in one disk of paraffin it is dangerous to attempt to separate them with a knife as one can never be sure of the direction the crack in the paraffin will take. I have found that a hand scroll saw or coping saw (which may be purchased for ten to twenty-five cents) does admirably for cutting a block of tissue from the main disk. A hot wire is used by some but is not nearly so convenient nor so accurate as the saw. The use of the saw permits many more pieces to be placed in the same space as no care need be taken to have well defined pathways for the paraffin to split along as is necessary when a knife is used for separating the pieces.

ROBERT T. HANCE.

A NEW SPECIES OF OPERCULARIA

Opercularia wallgreni Grier n. sp.

Plate XIX. Figs. 1 and 2

Bodies ovate or attenuate fusiform, about 3 times as long as broad, tapering mostly toward the pedicle extremity. Ciliary disc never elevated above the margin of the peristome a greater distance than ½ the length of the animal, apparently with but one circlet of cilia. Membranous collar moderately large, but obliquely set. Endoplast band-like, curved, parenchyma beneath granulated. Pedicle tree-like, slender, branching profusely and dichotomously, attaining a considerable proportionate altitude, delicately striate in a longitudinal direction. Transverse articulations wanting or present only where branching occurs.

Height entire polypidum 1.4 mm., length extended zooid .10 mm., width .022 mm., width of pedicle .005 mm.

Fig. 1.

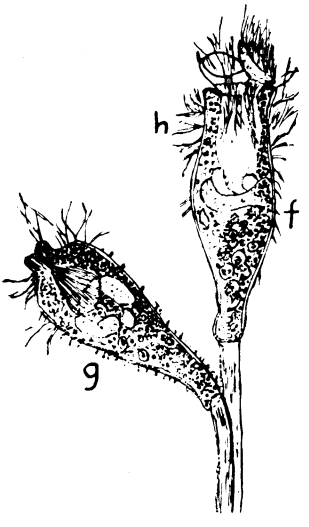

Fig. 2

PLATE XIX

Habitat.—Fresh water, apparently only upon aquatic plants. The colonies may include from 2 to about 200 zooids, which assume a nodding or pendant position after contracting. The species described was found in an aquarium in the writer's laboratory at the Central High School, first growing upon *Sagittaria platyphylla* Smith, but readily attaching itself to *Elodea, Myriophyllum,* and other aquatic plants. Its food consists for the most part of unicellular Algæ although Protozoa were sometimes observed in process of digestion. The species is very prolific, and while it does not grow in a hay infusion, quickly covers the walls of aquaria, growing thickest on the sides nearest the light. It is apparently of great longevity. This form I have respectfully dedicated to Dr. A. B. Wallgren, Professor of Zoology, University of Pittsburgh.

EXPLANATION OF FIGURES

PL. XIX.

Fig. 1. Entire colony x about 90.
a, b, c, d. Successive positions assumed by zooids during acquisition of food.
e. Curious introverted position noted.

Fig. 2. Two zooids x about 400.
f. Expanded, taking in food.
g. Contracted.
h. Attached bacterial growth.

Central High School,
St. Louis, Mo.

N. M. GRIER.

A METHOD OF MAKING TOTO MOUNTS OF UNICELLULAR FORMS

The matter of making toto mounts of unicellular forms often presents considerable difficulty. The cells or cœnobia settle so slowly that there is danger of losing them in the changes of liquid, and this slowness in settling makes the use of the more precise stains difficult. A method which has been successfully used for small forms like *Scenedesmus* is described in Chamberlain's "Methods in Plant Histology," University of Chicago Press, 1915. It consists of drying the cells down on the slide and then carrying them through all subsequent processes on the slide as in the case of paraffin sections. This method seems to cause some distortion